

## THE ROCKEFELLER UNIVERSITY

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NEW YORK, NY 10021

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JOSHUA LEDERBERG

PRESIDENT

Mr. Thomas R. Pickering
Assistant Secretary of State
Bureau of Oceans and International
Environmental & Scientific Affairs
Department of State
Washington, D. C. 20520

Dear Tom:

Thank you for your letter of January 12th inviting me to participate in your meeting of the panel on Biogenetic Engineering scheduled for February 20th. Unfortunately, I cannot at this point give a firm answer since I have a conflict for that date, elsewhere in Washington, which may not be resolved until the last moment.

For that reason let me make a few brief observations by this letter.

The long range implications are so vast that it will require some discipline to get a useful product from your panel's brief work. The questions of technology transfer, proprietary rights, and the framework of international commercial competition are precisely those that I believe will require urgent attention in the near future. The issuance of patents on "new life forms" notwithstanding, our own domestic law on patent protection for the products of biogenetic engineering is far from settled and the global situation is certainly going to be a tangled and contentious muddle for a long time to come. Quite possibly this will precipitate an interest in new institutions to provide a more orderly solution to these problems. Closely connected are our competition with Japan and Western Europe on the one hand, where there is some likelihood that we may be out distanced; and with the Soviet Union on the other which has only the feeblest base of modern genetic biology for which reason the interconnection between our technology transfer policies and their international behavior may come to a sharp focus precisely in the fields we are looking at now. availability of health related products of biogenetic engineering to the Third World is already a grave issue with respect to other pharmaceuticals.

5/20not seen enlender The rest of the world seems to have followed our own lead, more or less, with respect to the rigor of standards of laboratory practice in handling microorganisms but in the event of some laboratory accident this issue may well flare up again as a matter of international as well as domestic concern.

While agricultural productivity will without question be influenced in an important way this is not likely to happen at an economically crucial level within the next five or ten years and most of the issues then raised will already have been subsumed by the others. However, projections such as the effect of forecasted climatic change on the agricultural productivity of the Soviet Union may have to be revised over long periods of time to take account of new genetic technologies as well as inherent uncertainties in the climatic factors themselves. Such matters will undoubtedly raise new sets of foreign policy problems without there being much very obvious that we should be doing about it at the present time.

Probably appropriately for this group the more explicitly military potentialities are not included in the terms of reference. This is a matter taken up from time to time at the Defense Science Board and other like agencies. I would concur to "leave well enough alone" for the time being. It might be useful however for the panel to have the opportunity of some critical examination of DIA reports which, happily, have (in my own view) become progressively more realistic. The utility of this suggestion would be mainly feedback to other defense agencies rather than to the Secretary of your department.

I think you have a fine group: if there is anything lacking it is the direct perspective and experience of the entrepreneurial sector (beyond the consultative efforts that many members of the group will be involved in). Dr. Schneiderman\* may be able to play some role there. It occurs to me that someone like John Burns from Roche might well add an important informed and crucial perspective. Lilly would be the other American firm that has forged ahead and if you wished I could try to identify the particular figure likely to be most useful for this kind of discussion.

Since technology transfer likely will occupy center stage of the policy aspects of the discussion, may I also suggest Frank Press (on the assumption that he has actually vacated his recent office).

Your, sincerely,

Joshua Lederberg

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P.S. \*But Monsanto has bought into a non-U.S. DNA firm;
Roche is Swiss-owned; the CEO of Cetus (Berkeley)
is Canadian. Should there be a distinctive national
perspective?